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United States Patent [19][11] **Patent Number:** **5,187,083****Mullis**[45] **Date of Patent:** **Feb. 16, 1993**[54] **RAPID PURIFICATION OF DNA**[75] Inventor: **Kary B. Mullis**, La Jolla, Calif.[73] Assignee: **Specialty Laboratories, Inc.**, Santa Monica, Calif.[21] Appl. No.: **611,921**[22] Filed: **Nov. 13, 1990**[51] Int. Cl.⁵ **C12P 19/34**; C12N 1/08;
C12N 1/06[52] U.S. Cl. **435/91**; 435/6;
435/259; 435/270; 435/803; 435/820; 536/23.1;
935/19; 935/20; 935/21[58] Field of Search 435/6, 91, 270, 259,
435/820, 803; 536/27; 935/19-21[56] **References Cited****U.S. PATENT DOCUMENTS**

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5,063,162 11/1991 Kiefer 536/27*Primary Examiner*—Herbert J. Lilling*Attorney, Agent, or Firm*—Poms, Smith, Lande & Rose[57] **ABSTRACT**

The present invention provides a method for rapidly obtaining substantially pure DNA from a biological sample containing cells. The method involves gently lysing the membranes of the cells to yield a lysate containing genomic DNA in a high molecular weight form. The lysate is moved through a porous filter to selectively trap the high molecular weight DNA on the filter. The DNA is released from the filter using an aqueous solution to form a solution containing substantially purified DNA, from which the DNA is recovered.

29 Claims, 3 Drawing Sheets